

AMENDMENT UNDER 37 CFR § 1.111
Appln. No.: 09/910,037
Attorney Docket No.: Q65151

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Canceled).
2. (Currently Amended) ~~The broadband line driver according to claim 1, characterised in that~~ A broadband line driver comprising an amplifying device with an input and an output, and a transforming device coupled in series with the output of the amplifying device, wherein:
the transforming device is located in a feedback loop that couples the output of the amplifying device to the input of the amplifying device; and
the transforming device (T) has a transformation ratio which is higher than 1:2.
3. (Currently Amended) The broadband line driver according to claim [[1]] 2, wherein a feedback circuit is connected between an output of the transforming device and the input of the amplifying device.
4. (Original) The broadband driver according to claim 3, wherein the feedback circuit comprises resistors.
5. (Currently Amended) ~~The broadband line driver according to claim 1,~~ A broadband line driver comprising:

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an amplifying device with an input and an output;

a transforming device coupled in series with the output of the amplifying device;

a first input terminal (~~IN1~~) and a second input terminal (~~IN2~~) as well as a first output terminal (~~OUT1~~) and a second output terminal (~~OUT2~~);

the amplifying device (~~A~~) having a first and a second device input terminal (~~AI1, AI2~~) and a first and a second device output terminal; (~~AO1, AO2~~),

the transforming device comprising:

a transformer (~~T~~) with transformation ratio 1:n ($n \geq 1$), ~~and comprising~~

a primary winding with a first terminal (~~T11~~) and a second terminal, (~~T12~~) ~~and~~

a secondary winding with a first terminal (~~T21~~) and a second terminal (~~T22~~),

the first device output terminal (~~AO1~~) being coupled to a first terminal (~~T11~~) of the primary winding of the transformer (~~T~~), ~~and~~

the second device output terminal (~~AO2~~) being coupled to the second terminal (~~T12~~) of the primary winding,

the first terminal (~~T21~~) of the secondary winding being coupled to the first output terminal (~~OUT1~~), and

the second terminal (~~T22~~) being coupled to the second output terminal; (~~OUT2~~),

a first resistor (~~R17~~) being connected between the second output terminal (~~OUT2~~) and the first device input terminal; and (~~AI1~~), ~~and~~

a second resistor(~~R18~~) being coupled between the first output terminal (~~OUT1~~) and the second device input terminal (~~AI2~~);

wherein the transforming device is located in a feedback loop that couples the output of the amplifying device to the input of the amplifying device.

6. (Currently Amended) The broadband driver according to claim 5, wherein:

the first device input terminal (~~AI1~~) is coupled to the first input terminal (~~IN1~~) over a third resistor (~~R11~~),

the second device input terminal (~~AI2~~) is coupled to the second input terminal (~~IN2~~) of the line driver over a fourth resistor (~~R12~~),

a fifth resistor (~~R13~~) is connected between the first terminal (~~T12~~) of the secondary winding of the transformer (~~T~~) and the first output terminal (~~OUT1~~), and a sixth resistor (~~R14~~) is connected between the second terminal (~~T22~~) of the secondary winding of the transformer (~~T~~) and the second output terminal (~~OUT2~~),

a seventh resistor (~~R15~~) is connected between the first terminal (~~T12~~) of the secondary winding of the transformer (~~T~~) and the first device input terminal (~~AI1~~) and a eighth resistor (~~R16~~) is connected between the second terminal (~~T22~~) of the secondary winding of the transformer (~~T~~) and the second device input terminal (~~AI2~~).

7. (Currently Amended) The broadband line driver according to claim 6, ~~characterised in that~~ wherein the third resistor (~~R11~~) and the fourth resistor (~~R12~~) have substantially the same resistance value.

8. (Currently Amended) The broadband line driver according to claim 6, ~~characterised in that~~ wherein the fifth resistor (~~R13~~) and the sixth resistor (~~R14~~) have substantially the same resistance value.

9. (Currently Amended) The broadband line driver according to claim 6, ~~characterised in that~~ wherein the seventh resistor (~~R15~~) and the eighth resistor (~~R16~~) have substantially the same resistance value.

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10. (Currently Amended) The broadband line driver according to claim 5, ~~characterised~~
~~in that~~ wherein the first resistor (~~R17~~) and the second resistor (~~R18~~) have substantially the same
resistance value.

11. (Currently Amended) Digital subscriber line analogue front end comprising a
broadband line driver according to claim ~~[[1]]~~ 2.

12. (Currently Amended) A method of operating a broadband line driver comprising an
amplifying device according to claim 2, ~~comprising the steps of:~~
transforming the output voltage of the amplifying device to a higher value;
feeding back a signal from the transformed output voltage to an input of the amplifying device.